

## Patent Abstracts of Japan

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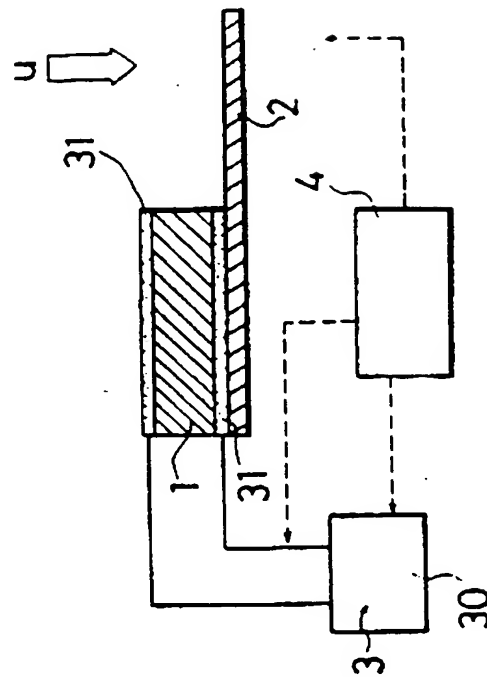
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TITLE : FLOW VELOCITY DETECTOR



**ABSTRACT :** PURPOSE: To obtain a small apparatus excellent in the atmosphere resistance and durability by arranging a piezo-electric element, a means of transmitting a fluid pressure thereto and a means of detecting the flow velocity of the fluid from distortion of the piezo-electric element.

**CONSTITUTION:** This apparatus is made up of a piezo-electric element 1 adapted to generate distortion according to an applied electric field while causing an electric polarization according to a stress, a mechanical force transmitting means 2 which is connected to the piezo-electric element 1 to transmit the pressure of a fluid thereto 1, a driving section 3 for applying an AC electric field to the piezo-electric element 1 and a detector section 4 which checks the physical quantity related to the distortion of the piezo-electric element 1 to detect the flow velocity of the fluid according to the detection value thereof. When a pressure is applied to the mechanical force transmitting means 2, the transmission means 2 is displaced according to the pressure and the piezo-electric element 1 is distorted according to the displacement to cause a change in the voltage, current and the like. Thus, the change is detected with the detector section 4 to permit the detection of the flow velocity based on the detection value.

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